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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,411	07/18/2003	Harshang Pandya	70031045-1	4194

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EXAMINER

BENSON, WALTER

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 03/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/622,411	Applicant(s) PANDYA ET AL.	
	Examiner Walter Benson	Art Unit 2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Amendment A filed 19/11/2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 7-9 and 15-20 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 10-14 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

FINAL ACTION

1. Amendment A, received on 11/19/04, has been entered into record.
2. Claims 1-20 are pending.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 9 and 17-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Koeman et al. (US Patent No. 5,821,760 and Koeman hereinafter).
5. As to claims 1 and 9, Koeman discloses a system for determining near-end cross-talk effects comprising:
 - inputting a test signal into at least one conductor of a transmission cable (col. 4, lines 34-36);
 - receiving a raw cross-talk signal from at least another conductor of the transmission cable (col. 4, lines 36-39);

processing the raw cross-talk signal in the frequency domain to determine a combination of near-end cross-talk components thereof, said combination of components being characteristic of the near-end cross-talk effects (col. 5, lines 16-21 and col. 13, lines 36-41).

6. As to claim 17, Koeman discloses a system for determining near-end cross-talk effects comprising:

where the processing unit is a microprocessor (col. 9, lines 52-56).

7. As to claim 18, Koeman discloses a system for determining near-end cross-talk effects further comprising:

an analog to digital converting unit being adapted to digitize the raw cross-talk signal received by the receiving unit. (col. 9, lines 34-50).

8. As to claim 19, Koeman discloses a system for determining near-end cross-talk effects comprising:

where the system is implemented in a portable testing instrument (Fig. 2).

9. As to claim 20, Koeman discloses a system for determining near-end cross-talk effects comprising:

where the injecting unit, the receiving unit and the processing unit are contained within a hand held testing instrument (Figs. 1 and 3; col. 10, lines 11-14).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

11. Claims 7 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Koeman in view of Sciacero et al. (US Patent No. 6,636,048 and Sciacero hereinafter).

Although the system disclosed by Koeman shows substantial features of the claimed invention (discussed in paragraphs above), it fails to disclose:

where the test signal has a frequency that is swept between 1 megahertz and 350 megahertz.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Koeman, as evidenced by Sciacero.

In an analogous art, Sciacero discloses a method for diagnosing performance problems in cabling having:

where the test signal has a frequency that is swept between 1 megahertz and 350 megahertz (col. 8, lines 15-18).

Given the teaching of Sciacero, a person having ordinary at the time of the invention would have readily recognized the desirability and advantages of modifying Koeman in view of Sciacero by employing the well known features of determining the performance of cable connections, such as

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disclosed by Sciacero to efficiently evaluate the emergence of higher performance Category 6 and 7 cabling systems.

12. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koeman in view of Ono et al. (US Patent No 5,483,684 and Ono hereinafter).

Although the system disclosed by Koeman shows substantial features of the claimed invention (discussed in paragraphs above), it fails to disclose:

where the receiving unit is a phase locked loop receiver.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Koeman, as evidenced by Ono.

In an analogous art, Ono discloses a method for searching a specified band of frequencies for a plurality of active signal frequency having:

where the receiving unit is a phase locked loop receiver (col. 6, lines 4-6).

Given the teaching of Ono, a person having ordinary at the time of the invention would have readily recognized the desirability and advantages of modifying Koeman in view of Ono by employing the well known features of determining the performance in a scanning receiver, such as disclosed by Ono to simplify the process of programming frequencies from within a given band of frequencies.

13. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Koeman in view of Bottoman (US Patent No. 5,32,603 and Bottman hereinafter).

Although the system disclosed by Koeman shows substantial features of the claimed

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invention (discussed in paragraphs above), it fails to disclose:

subtracting the combination of near-end cross-talk components from the raw cross-talk signal to remove the near-end cross-talk effects.

Nonetheless, these features are well known in the art and would have been an obvious modification of the system disclosed by Koeman, as evidenced by Bottman.

In an analogous art, Bottman discloses a cross-talk measurement apparatus for characterizing the performance of a LAN cable system having:

subtracting the combination of near-end cross-talk components from the raw cross-talk signal to remove the near-end cross-talk effects (col. 4, lines 49-53).

Given the teaching of Bottman, a person having ordinary at the time of the invention would have readily recognized the desirability and advantages of modifying Koeman in view of Bottman by employing the well known features of determining the performance of cable connections, such as disclosed by Bottman to efficiently evaluate the response of the LAN cable system without the effects of the near end connector.

Allowable Subject Matter

14. Claims 2-6 and 10-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The prior art of record fails to teach in combination as claimed a system for determining near-end cross-talk effects where the near-end cross-talk components

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include at least one of a cross-talk component that is non-periodic over the sweep frequency range and a cross-talk component that has a repetition period of more than a predetermined number of sweep frequency steps.

Response to Arguments

15. Applicant's arguments filed 11/19/04 have been fully considered but they are not persuasive.

16. In the remarks the applicant argued in substance that:

(1) Koeman does not teach or suggest "to conduct the processing of a raw cross-talk signal components in the frequency domain".

17. Examiner respectfully traverse applicant's remarks:

As to point (1) see paragraphs above, Koeman discloses processing the raw cross-talk signal in the frequency domain to determine a combination of near-end cross-talk components thereof, said combination of components being characteristic of the near-end cross-talk effects (col. 5, lines 16-21 and col. 13, lines 36-41).

18. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Prior Art Made of Record

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure

A. Adamian et al. (US Patent No. 6,826,506 B2) discloses a test apparatus for performing line testing of cable and networks including DUT.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter Benson whose telephone number is (571) 272-2227. The examiner can normally be reached on Mon to Fri 6:30 AM to 4:00 PM.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on (571) 272-2180. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Walter Benson *WB*
Patent Examiner

February 27, 2005

Anjan Deb
ANJAN DEB
PRIMARY EXAMINER